

Arctic Lessons on Local Monitoring, Workshop Oct. 2009

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"Lessons Learned from the Use of Local Ecological Knowledge in Arctic Resource Management"

Venue: The conference room at Nordeco, Skindergade 23, Copenhagen, Denmark.

Participants: Amalie Jessen (Head of Department of Fisheries, Hunting and Agriculture, APNN, Greenland), Jesper Madsen (Director of Department of Arctic Environment, National Environmental Research Institute, Denmark), Flemming Merkel (Research Biologist, Department of Arctic Environment, National Environmental Research Institute, Denmark, and Greenland Institute of Natural Resources, Greenland), Elmer Topp-Jørgensen (Head of Section, DINM, Greenland Self Rule), Martin Nielsen (PhD student, formerly Project manager, Hunting Department, Directorate for Fishing, Hunting and Agriculture, Greenland), Martin Enghoff (Anthropologist, Nordeco), Finn Danielsen (Ecologist, Nordeco), Bjarne Palsson (Environment and Food Agency, Government of Iceland, Iceland). Minutes prepared by Michael Køie Poulsen (Biologist, Nordeco).

Agenda:

- Presentation of the project 'Opening Doors to Native Knowledge': objectives, activities and outputs, by Elmer Topp-Jørgensen.
- Use of Local Ecological Knowledge in Wildlife Management in Greenland, by Martin R. Nielsen.
- Lessons from the National Environmental Research Institute and Greenland Institute of Natural Resources in using Local Knowledge, by Flemming Merkel.
- International experiences of locally-based monitoring and management of living resources, by Finn Danielsen.
- Discussion: which experiences should be brought to the Ilulissat workshop? Institutional set-up, resources and methods. Facilitator: Finn Danielsen.

Presentation of the project by Elmer Topp-Jørgensen. See separate powerpoint presentation.

Amalie Jessen commented that the municipalities needed to be helped to monitor the different local populations that were being used (Reindeer, Musk Ox, Arctic Char, etc). Capacity building issues were important as limited biological advice was available locally.

Amalie Jessen asked Elmer Topp-Jørgensen what his impressions were of the response to the pilot project initiative from the municipalities. The pilot project had been underway for about three years and DFFL had discussed the concept of local based monitoring and management with hunters/fisherpeople and NGOs on several occasions and the concept was part of a questionnaire sent out to individual hunters and KNAPK as well as KNAPPs. Elmer Topp-Jørgensen said that he had presented the ideas of the pilot project to several municipalities in north and east Greenland a year ago. The reactions were generally positive and most people had shown a

strong interest in being more involved in monitoring and management of wildlife. Amalie Jessen added that she just had been to several of the same places, e.g. Siorapaluk, north of Qaanaq/Thule, and everybody remembered him well and hoped to become involved in the pilot project.

Presentation of Examples of Use of Local Ecological Knowledge in Wildlife Management in Greenland, by Martin R. Nielsen. See separate powerpoint presentation.

Martin Nielsen had the following conclusions regarding Local Ecological Knowledge:

- It represents a largely untapped potential in Greenland
- It could potentially inform both national and local management decisions
- In order to fully integrate Local Ecological Knowledge into management decisions, co-management agreements should be established between the government and the local hunters/catchers/fisherpeople
- The cost-efficient data potential of systematically recorded observations by the hunters needs to be used
- Close attention needs to be paid to stakeholder incentives

Presentation of Integration of Local Knowledge by Flemming Merkel. See separate powerpoint presentation. Some key points from his presentation follow.

Why are community-based monitoring programs important? Because:

- There are limited resources available within the Greenland Institute of Natural Resources and the National Environmental Research Institute (Denmark) for biodiversity monitoring;
- The logistical costs of monitoring can be reduced significantly by involving local hunters and fisherpeople;
- The timing of surveys is more flexible; important events may happen outside the breeding season when it is possible that no scientists are around;
- Community-based monitoring programs provide opportunities for building capacity and trust between national management agencies and local users;
- They lead to a higher awareness of the needs of local wildlife populations; and
- They facilitate local responsibility for sustainable resource use.

There is already a formal cooperation agreement between the hunters' and fisherpeople's organization in Greenland (KNAPK) and the Greenland Institute of Natural Resources.

By-catch of eiders by fisherpeople using gillnets has been monitored by recording birds for sale at the market in Nuuk, 2001-2002. The fisherpeople contributed with information about nets used, etc. The sale of eiders caught as by-catch has subsequently been banned. Some fisherpeople feel that the information they provided was used against them. Amalie Jessen commented that sustainable use was good for all, suggesting that locals should be interested in providing information aimed at securing sustainable use.

There is evidence of a 80% population decline in common eiders over the 1960-2000 period. This decline was probably linked to unsustainable harvesting. Hunting regulations for Eider changed in 2001 when the closed season was substantially extended. The result was a large population increase (until the recent outbreak of avian cholera). This is perhaps the only example in Greenland for decades of a documented population increase for a water bird.

A community-based eider breeding colony monitoring program started in 2001. Local people were trained by Flemming in counting nests of Common Eider. A total of 36 local hunters contributed information on breeding Eiders. Three people provided 32% of the data records. 32 colonies were included in the survey and surveyed annually. Another 25 colonies were only surveyed by scientists and used as reference colonies. The number of nests in the colonies surveyed by both locals and scientists increased. Numbers in reference colonies increased likewise.

Flemming Merkel mentioned a new Nordic eiderdown project as another excellent example of cooperation between scientists, managers and hunters. Hunters look after and protect nest boxes of breeding eiders. The hunters can then benefit from harvesting the down.

Flemming Merkel commented that we could not yet predict the species for which Local Ecological Knowledge could provide accurate information. The results were very different for two common bird species that are both harvested, the Eider and the Thick-billed Murre. The local information on Eider correlated impressively well with the findings by the scientists, with almost the same information on population trends, distribution and other environmental information that could explain the trends. On the other hand, for the Thick-billed Murre, local information seemed to be less accurate; for instance, local people had reported trends in numbers and distribution that did not match what the scientists were finding. The local people that were interviewed about Murres believed that the birds had simply moved somewhere else when they encountered less and they did not realize that what in fact had happened was a sharp decline in the breeding population.

Flemming Merkel had the following conclusions regarding the usefulness of local knowledge:

- Essential for an initial understanding of the whereabouts of species;
- Often useful in describing the distribution of species, long-term population trends or sudden significant changes;
- Rarely accurate in quantifying population sizes;
- Rarely capable of identifying the causes of decline, especially for migratory species where identifying causes of decline can be particularly complicated;
- Management based solely on local knowledge is not recommended for migratory species;
- Combining scientific and local efforts through community-based monitoring programs has great potential, although species and methods should be carefully selected.

Amalie Jessen wanted to know if the eider census initiative had reported its results back to the local counters. Flemming Merkel confirmed this.

Presentation of International experiences of locally-based monitoring and management by Finn Danielsen.

Finn Danielsen had the following conclusions regarding locally-based monitoring and management, based on his recent paper on this topic in Conservation Biology:

Both kinds of monitoring, scientist-executed and locally-based, have different strengths and weaknesses.

For participatory monitoring to be effective:

- Keep it simple
- Focus on resources of relevance to the local people
- Fit it into other work done on a daily basis by the local people
- Use bio-physical and socio-economic threats data
- Establish a mechanism to integrate information into decision-making.

Monitoring can be an effective vehicle for getting people more involved in the management of resources

- Make sure the methods match the objectives and resources. Begin small, expand as capacity develops

Bjarne Palsson described the positive experiences of using local knowledge as an input for management decisions regarding populations of puffin and other seabirds in North and West Iceland.

Discussion

Finn suggested the following main topics of discussion:

- Level of local involvement, inc. incentives for participation in monitoring
- Institutional anchoring of the monitoring scheme
- Resources/areas to be included in the monitoring
- Possible field methods to be used for the monitoring
- Communication of the results (not discussed)
- Long-term sustainability, inc. links to Greenlandic national monitoring strategy
- Other key Arctic initiatives to link with

Level of local involvement and institutional set-up

Finn Danielsen asked Jesper Madsen for his view on what an appropriate scale of local involvement in the pilot project would be. Jesper felt it was too early in the process to answer this. He stressed that we should do all we could to encourage dialogue between the hunters/catchers, the scientists and the Self-Rule government.

Jesper also stressed that that the project should collaborate closely with GN, so that the project can contribute to further strengthen the collaboration between the local stakeholders and the biologists. Moreover, he found it is crucial that the project builds on the experiences with local stakeholder involvement that already have been made by GN in their projects.

Amalie Jessen suggested that the following should be involved at the local level:

- The municipality should provide one or two contact persons for the project.

- Local hunters/fisherpeople from KNAPP/TFAP
- Three wildlife officers or assistants ('jagtbetjente')
- If there is a part-time hunters' association (TPAK) in the community, they should be involved
- Staff at municipality (important)

Amalie Jessen stated the need to assist the municipalities in Natural Resource Management e.g. in Manitsoq for Arctic Char (trout) management. Amalie Jessen presented interesting experiences from Uummannaq and Upernavik where the municipal authorities have a contact person who is involved in collaborating with the government on collecting lost fishing gear.

Finn Danielsen said that the data collectors could be hunters, fisherpeople and others interested in the environment. Data could be analyzed and interpreted at local level - as well as at national level by the Self-Rule government.

Jesper Madsen found that Finn Danielsen's diagram above, comparing participatory and scientist-executed monitoring, was important. It shows how participatory monitoring is quick in obtaining local management decisions while scientific monitoring takes longer but leads to large-scale management decisions.

Jesper Madsen informed the meeting of the activities of the Arctic Council, the Circumpolar Biodiversity Monitoring Programme (CBMP) and the Sustained Arctic Observing Networks (SAON). It is a long international process. It has taken 3 years to come up with a proposal. It is now embarking on a second phase, which includes implementation. It is not clear when and to what extent local stakeholder participation will be included in the SAON initiative.

Finn Danielsen emphasized the usefulness of testing different approaches on the ground to see what works at the village level.

Resources/areas to be included in the monitoring

There was a debate as to what natural resource management decisions could be taken locally. Which species do we want to let the locals take management decisions on? These species should have special potential for monitoring in a Locally-Based Monitoring approach.

Flemming Merkel stated that he agreed that we should engage in local monitoring approaches but that, at the same time, we should be careful not to promise too much management decision-making to local people if we cannot fulfil our promises. Local communities cannot decide alone on the management of migratory species. Other participants assured Flemming Merkel that nobody expected local communities to take sole responsibility for monitoring and management decisions for all species, but that it is necessary to describe which management interventions that can be made at which levels (village, municipality, central government). Martin Nielsen said that acceptable hunting methods could sometimes be decided by local people.

Some suggestions as to what local people could monitor:

- Birds: Guillemot, Arctic Tern, Kittiwake, Eider, Canada Goose, White-fronted Goose, ...
- Land mammals: Reindeer, Musk Ox , ...
- Marine mammals: Common Seal, White Whale, Narwhale, large whales, Walrus?, Polar Bear? Smaller whales such as the Harbour Porpoise
- Fish: Arctic Char (trout)
- Non-biotic: ice, perhaps earthquakes

Jesper Madsen said that Martin Nielsen had this morning given a brilliant example of local monitoring of phenological events within the Greenland narwhal population.

Flemming Merkel asked what the role of the Greenland Institute of Natural Resources would be. Finn Danielsen said that the Institute would participate in the project's Steering Committee. Flemming Merkel added that when potential species for locally-based monitoring were selected, it would be useful to agree on this with the Institute's experts. He added that local people needed to know the limits of their management decision-making capacity so making a matrix on this would be useful.

Martin Enghoff said that the species to be monitored locally had to be those that locals could be involved in managing. It also had to be more than one species for people to get involved in a meaningful way. Martin Nielsen pointed out that the appropriate scale of focus should be on what aspects of the management of relevant species local people can be involved in rather than just what species.

Elmer Topp-Jørgensen said that we should remember to look further into the incentives that could ensure the long-term involvement of local people in monitoring and management of natural resources.

Amalie Jessen said that she recognized that locals were sometimes very strict managers when they themselves had to take management decisions. She added that we also needed to know which species we needed data on even if we did not need management interventions for those species at the moment.

Experiences from Greenland have already shown that local people can collect useful phenological data that would never be collected by scientists, who are not present all year round in the local area. Phenology is the study of events and how these are influenced by seasonal and inter-annual variations in climate. Phenology has been principally concerned with the dates of the first occurrences of biological events in their annual cycle.

Martin Nielsen said that local communities had already shown that they possess information on changes in seasonal availability of Narwhal and had been shown to act on local ecological knowledge by creating bylaws as well as informal local rules. Jesper Madsen suggested that Walrus and Polar bear be included as target species for monitoring as these were potentially useful climate change indicators. Jesper Madsen said that we needed to introduce climate change monitoring using phenological data collection. It would also be helpful if local monitoring could encourage hunters to increasingly shoot

Canada Goose in order to support the declining population of Greenland White-fronted Goose.

Amalie Jessen expressed a wish for an overview of the current legal framework for the management of each species. For example, do we currently have a national executive order regarding this particular species? Elmer Topp-Jørgensen suggested a species list, describing for each species what management decisions could be taken by local people without violating current national legislation (hunting seasons, hunting areas, bag limits, hunting methods, etc.). It was agreed that the Self-Rule government would try to draft a matrix showing what management decisions could be decided at which management level (village, municipality, central government) and for which species, and circulate it for comments.

Martin Nielsen commented that depending on the level of decision making powers devolved to those involved in monitoring close attention has to be made to the composition, transparency and accountability of the local institutions that these rights will be vested in relation to the rest of the community - that are often quite heterogeneous in terms of interests and filled with local politics and conflicts - as well as in relation to the larger society.

Finn thanked participants for the valuable discussions and closed the meeting. The next task of the project will be the "kick-off" workshop with representatives of catchers/hunters, the municipality, the Self-Rule government, the Greenlandic members of the Project Steering Committee etc. in Ilulissat in November 2009. Field pilot establishment will begin in early 2010.